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THE SOCIAL CORE OF THE HIGH-SCHOOL CURRICULUM

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Traditionally the purpose of the constants of the secondary-school curriculum has been to meet certain needs thought to be fundamental. Latin with its auxiliary lines of instruction, constituting the constants of the colonial Latin grammar school, was supposed to meet the professional need of the time by giving boys their foundational training for the ministry. By slow degrees the academies and the early high schools were permitted by the colleges, in response to other social demands, to add to the ancient-language core such constants as mathematics, English, science, and history.

The growth of the modern cosmopolitan high school with its increasing and varied functions has made the old plan of curriculum-making impracticable. In recent years the reverse movement of eliminating certain constants has taken place, and at the same time there has been a growing recognition of the value of elective subjects. The classics were the first to be dropped from the list of constants. Then followed the withdrawal of the requirement of any foreign language for high-school graduation. Mathematics is now a questionable constant, and science must be a general and highly socialized science to escape criticism as a constant.

There seem to be no clearly defined principles guiding the curricular changes in the high school. Although there has been a remarkable uniformity of practice, the question of what subjects should be included in the core of constants has been decided by the colleges and universities on the basis of traditional tendencies and present social expediency rather than on that of principles based upon the fundamental needs of high-school students. Subjects have been made the constants of the curriculum for a variety of alleged reasons. Among the reasons assigned for

including subjects in the core of constants were the following: In some cases a subject was included for its professional values, and when these values were not in evidence it was included for its disciplinary values or cultural values or college-preparatory values. In recent years much has been made of vocational values, citizenship values, and physical-development values as reasons for prescribing certain subjects. As new subjects representing new values have gained recognition their advocates have sought to find a place in the sun for them.

At all times the college has been the final arbiter in deciding what values should determine the constants of the high-school curriculum. The constants are usually the prescribed college-admission requirements, and there seems to be no other reason for the present arrangement of constants. In view of the development of our cosmopolitan world-serving high schools turning a very small percentage of their students collegeward, and in view of the increasing needs of the people for collective action guided by common social insights which are not developed by the present core of college requirements or constants, it appears that we need a new theory and practice of high-school curriculum-making.

A more rational theory of constants may be stated as follows: The constants of the high-school curriculum should be only those lines of common knowledge and training which individuals of a democracy must have to live together as free and responsible citizens. Stated concretely there should be no subjects prescribed for all students of the high school which do not deal directly with problems of health, citizenship, and the means of communication through the vernacular.

We shall appreciate the bearings of our question better by first considering it in relation to the elementary school and the junior high school. Without attempting to define the varied aims of elementary instruction, it is sufficient to state that the children are securing a foundation of common knowledge and training out of which will develop their special lines of work and interests, and which will leave for them, on the other hand, an inner core of common knowledge and training, emphasizing English, health, and citizenship. This differentiated stage of work should begin to emerge in the junior high school.

A large variety of elective offerings should be made in the junior high school in order that pupils of various dominating interests and vocational aptitudes may have ample opportunities for self-discovery under the careful direction of the teachers and of the vocational-guidance director. As the pupil passes through the junior high school, his prescribed subjects, brought forward from the elementary school, should gradually narrow down to English composition, hygiene (including physical training), and citizenship studies, while his opportunities for elections should gradually increase.

Such an arrangement of subjects, however, will mean little in helping the pupils discover their special aptitudes and interests unless their studies are used as instruments of social interpretation. When the pupils have finished the work of the first six grades they should have a reasonable mastery of the technique of the common branches in order that the major emphasis in the junior high school may be placed upon the use of the technique. Of course the junior high school, or even the senior high school, or the college for that matter, is not absolved from teaching the technique of subjects; this point of emphasis changes gradually. The child in the primary grades is primarily engaged in acquiring the technique of reading, writing, and arithmetic and to a less extent the technique of music and industrial arts, including drawing, painting, etc. In the fifth and sixth grades the pupils have, generally speaking, a sufficient reading vocabulary to begin reading for thought, a sufficient command of spelling and writing to begin writing original compositions, a sufficient control of number combinations to apply them to practical problems found outside the textbook, a sufficient grasp of musical notation to do simple sight-singing and to work out simple harmonies, and sufficient skill in using pencil, crayon, scissors, and shop tools to work out simple and original designs in drawing and simple projects in manual training.

As the pupil passes into the junior high school the emphasis upon the acquisition of the technique of subjects gradually shifts to the use of the technique as tools in securing new ideas and appreciation, solving problems, and executing projects. However, this distinction between the instruction of the elementary grades and that of the junior high school is only a distinction of emphasis,

and it varies in the different kinds of activities. As the pupil goes into the junior high school he will study arithmetic more to solve home, school, and community problems than to solve problems as a preparation for more mathematics, although the latter phase should not be neglected. He will write compositions primarily to express himself fully, freely, and originally to his fellows rather than to learn the technique of punctuation, sentence-structure, etc. By means of the trying-out processes in applying the social test to the pupil's studies and activities and by other means of vocational guidance he ought to be fairly well prepared to choose the line of work which will meet his special needs.

If we have characterized the work of the junior high school correctly, then it is clear that the curriculum of the senior high school as it now stands should be reorganized. The time has nearly arrived when the constants of the high-school curriculum will no longer consist of a core of subjects for disciplinary purposes or general culture purposes or vocational and professional purposes. Neither the need of training for citizenship nor that of the divergent interests and vocations can be satisfied longer by arranging its courses under the traditional captions of "English Course," "Classical Course," "Latin-Scientific Course," "Scientific Course," etc. These old disciplinary and knowledge classifications have little meaning for students and teachers alike. There is little in such classifications that indicates definite purposes in the selection of branches or in the treatment of subject-matter.

Preparation to enter college or university is usually a preparation to enter ultimately some one of the professions, as teaching, law, medicine, engineering, or the ministry. In the main the preparatory course relating to these several professional destinations is fairly well determined. It consists of at least three years of English, two years of foreign language, one year of ancient, mediaeval, English, American, or modern European history, one and one-half years of mathematics, one year of science (usually physics), and six and one-half years of electives. In case students are planning to become engineers they should elect more mathematics and physical and chemical science; to become physicians, more biological, chemical, and physical science; to become lawyers, more

English, history, and language; to become ministers, more English, history, and social science; or, to become teachers, more of the subjects in which they wish to specialize. It ought to be perfectly clear, however, that the fact that universities require eight to nine units of certain subjects for admission constitutes no adequate reason for making these requirements the constants of the high-school curriculum. The decision to go to the university is an elective decision just the same as the decision to elect woodwork when one chooses to become a carpenter is an elective decision. If a student decides to go to the university he should choose the grouping of the subjects which will best prepare him to enter and pursue his university work, or if he desires to become a machinist he should choose the grouping of subjects which will best prepare him for that work. Preparing for the university or a vocation at the end of the high-school course is an election, and neither kind of preparation should have any weight in determining the prescribed subjects for all high-school boys and girls.

Fortunately there is no longer any need of making high-school constants and university-admission requirements synonymous terms. Since 1890 the colleges and universities have steadily increased the number of optional subjects which may be offered for admission. A system of "high-school exemptions" is being introduced in the universities. This system might be called a "high-school-university reciprocity treaty," because when a student enters with a certain number of credits in science, mathematics, language, etc., he is not required to take these subjects in the university, and when he enters without the required number of credits in these subjects he must take them in the university, for which, however, he receives university credit. He may enter the university in either case without condition, provided he can present fifteen or sixteen units from an accredited high school. The student who plans well for admission under this system increases his opportunities for university election.

Let us apply the theory of the social core and electives to curriculum-making (1) of the junior high school and (2) of the senior high school.

JUNIOR HIGH-SCHOOL CURRICULUM

CONSTANTS AND ELECTIVES

Constants. (1) *Primary group including English, United States history, community civics (including community sanitation), physical training (including personal hygiene).*—The study of English should emphasize oral and written composition and should extend through the three years of the junior high school. United States history should extend through the seventh and the first half of the eighth years, and community civics should be offered during the last of the eighth and the first half of the ninth years. Physical training should extend through all three years.

Constants. (2) *Secondary group.*—Certain other branches should be admitted to the junior high-school constants on condition that they be organized in such a way as to make important contributions to citizenship. This group should include *mathematics, elementary and general science, geography, and home economics for girls.* A highly socialized form of mathematics should extend through the seventh and eighth years. It should be made a real instrument in solving social and economic problems which are significant in the common life of all junior high-school pupils. Elementary and general science should be highly socialized, and it should include community sanitation. Elementary science should extend through the seventh and eighth years, and general science through at least one-half of the ninth. Geography should be closely connected with elementary science; indeed, so closely connected that it will be the get-away-from-home part of the elementary-science course. So organized, it should extend through the seventh and eighth years with elementary science. It may be debatable whether home economics should be prescribed for all girls in the junior high school. There is probably a common ground of experience within the large field of home economics which contributes to citizenship efficiency sufficiently to warrant its prescription for all girls through the seventh and eighth years.

Elective groups.—All other subjects should be placed in the elective list, not to be chosen by any random method, but with certain definite purposes in view, such as: (1) the discovery of the pupil's vocational or professional aptitudes; (2) his participation in

recreational, avocational, and aesthetic activities and appreciations; and (3) as far as possible to stimulate him to acquire general knowledge and interests of world-significance.

Electives are to be excluded from the prescribed list, not because they are less important, but because they are not of universal importance. Indeed as instruments in realizing particular purposes they are of highest importance, but they should be evaluated and taught with the appropriate purposes in mind.

Among the controlling purposes of election in the junior high school is that of prevocational instruction. Such instruction is too often interpreted as manual projects in wood or other materials having more or less industrial significance, and sewing and cooking for girls, paralleling, with little or no connection, the traditional subjects of the upper elementary grades or of the junior high school. Again, prevocational instruction is frequently considered important only for children retarded in the traditional branches or for the children of industrial workers.

The course in prevocational instruction should provide (1) a variety of vocational experiences, (2) related technical information and related processes of the vocational experiences, and (3) supporting subjects treating such topics as the hygiene, the civics, and the economics of the vocations. The first and second groups of activities should be conducted by the same teachers. The third group of activities should be provided in the civic core of the junior high school. These three phases of prevocational instruction should deal with the three major divisions of vocations—industry, commerce, and agriculture.

Prevocational instruction is a part of the larger program of vocational guidance. It is that part which furnishes vocational experience and vocational information.

In the first stage of its development vocational guidance was thought to consist in analyzing the vocations and the child's physiological and psychological characteristics as the basis of giving expert advice regarding the choice of a vocation. While this phase of the work is still important it is now understood to be fundamental that the child should participate in making a choice of the vocation. Indeed it is not imperative that all pupils should choose their

vocations before finishing the junior high school or even before finishing the senior high school. But in this country, where everyone should work, some vocational experience and some study of the great fields of human endeavor should be in the curriculum of the junior high school. What specific vocational experience and what vocational information should be emphasized will depend (1) upon the kind of community in which the school is located and (2) upon the vocational aptitudes of the pupils.

TABLE I
JUNIOR HIGH-SCHOOL CURRICULUM

ELECTIVES	CONSTANTS	ELECTIVES
Guidance—Vocational	Citizenship Knowledge and Activity	Guidance—Professional, Avocational, Cultural
Seventh grade: Industrial drawing Woodwork Metal-work Elementary business methods Elementary agriculture	Seventh grade: English United States history Physical training Elementary science—geography Arithmetic Home economics (girls)	Seventh grade: Foreign languages Music (voice and instrumental) Dramatics Art appreciation Drawing Painting
Eighth grade: Industrial drawing Woodwork Metal-work Printing Elementary business methods Elementary agriculture	Eighth grade: English United States history, $\frac{1}{2}$; community civics, $\frac{1}{2}$ Physical training Elementary science—geography Arithmetic Home economics (girls)	Eighth grade: Foreign languages Music (voice and instrumental) Dramatics Art appreciation Drawing Painting Clay and pottery
Ninth grade: Industrial drawing Woodwork Metal-work Printing Cement-work Bookkeeping Stenography Typewriting Business arithmetic Agriculture Home economics	Ninth grade: English Physical training Community civics, $\frac{1}{2}$; general science, $\frac{1}{2}$	Ninth grade: Foreign languages Music (vocal and instrumental) Dramatics Algebra Debating and oratory Art appreciation Drawing Painting Clay and pottery Botany History

In addition to the various prevocational opportunities, the junior high school should offer foreign languages, music, dramatics,

drawing and painting of the fine-arts type, as activities calculated to assist in discovering the professional aptitudes of the pupils. These branches also will be important in discovering their avocational and cultural interests.

We have suggested three general groupings of studies—the citizenship, the vocational, and the professional and cultural. Of course such group arrangements of studies are not mutually exclusive, because vocational, citizenship, professional, and cultural values are not mutually exclusive. At best any grouping of subjects of instruction is only a grouping for emphasis. The problem is to help the boys and girls find themselves. This problem cannot be solved by confining their work to prearranged courses. All of the junior high school is for each pupil as far as he can make profitable use of it. Necessarily in a vocational-guidance program there will be many “zigzag” journeys. The “zigzagging” should be done as intelligently as possible.

Tabulated in general outlines the curriculum of a junior high school of a small city might follow the suggestions given in Table I.

TABLE II
SENIOR HIGH-SCHOOL CURRICULUM
Constants and Elective Groups

Elective Groups Leading to Vocations Requiring Less than College Preparation	Constants	Elective Groups Leading to College Courses
Tenth grade . . .	{ English composition General modern history Physical training	
Eleventh grade . .	{ English composition United States history Physical training	
Twelfth grade . . .	{ English composition Civics [*] Physical training	

^{*} Civics here should include economics.

In each of the three years of the junior high school, pupils could elect from three to four subjects in addition to the required subjects or constants.

By the time the pupil reaches the senior high school he should be able to elect groups of subjects relating to definite goals of achievement in the vocations, professions, etc. The constants of the senior high school should be limited to the "primary group," including English composition, history, civics, and physical training.

In each of the three years of the senior high school the students could carry from two to three units in their elective groups in addition to the required constants.

Assuming that the student has discovered his special vocational or professional aptitudes and avocational or cultural interests during the junior high-school period, what would be his senior high-school program? Supposing he desires to become an agriculturalist, his program might be as follows:

CONSTANTS:

English composition.....	3 units
History.....	2 units
Civics.....	1 unit
Physical training.....	

GROUP ELECTED—VOCATIONAL—AGRICULTURE:

Agriculture.....	3 units
Botany.....	1 unit
Physics or Zoölogy.....	1 unit
Farm accounting.....	$\frac{1}{2}$ unit
Farm carpentry.....	$\frac{1}{2}$ unit

FREE ELECTIVE—AVOCATIONAL, CULTURAL, ETC.:

One to three units

Suppose that a student wishes to enter the university, possibly to study medicine. His program might be as follows:

CONSTANTS: Same as above:

GROUP ELECTED—PROFESSIONAL—PREPARING TO STUDY
MEDICINE:

Physics.....	1 unit
Chemistry.....	1 unit
Zoölogy.....	1 unit
Mathematics.....	1 unit
Foreign language.....	1 or 2 units

FREE ELECTIVES—AVOCATIONAL, CULTURAL, ETC.:

One to three units

NOTE—It is assumed that a student preparing to enter college will probably have elected at least one year of algebra and one year of foreign language in the junior high school.

In like manner programs for students of various vocational or professional destinations could be worked out.

Relation of the social core to elective groups.—The subjects of the social core strengthen vocational instruction (1) by making it unnecessary for vocational students to pursue the college-preparatory subjects which are unrelated, or at best remotely related, to their vocational preparation, and (2) by furnishing supporting information and training for their vocational courses. English composition should use the vocational projects as content for themes. Civics should deal with the citizenship problems of the vocations, and United States history should include the more important developments in industrial history. (3) The subjects of the social core strengthen preparatory instruction by providing supporting information and training for branches which lead to the professions. English composition should deal to a considerable extent with the problems of the subjects of the preparatory group. Civics should include a study of the ethics of the professions and the opportunities and needs of professional service. United States history should deal to some extent with the development of the professions. (4) Finally the social core provides a common ground for students of various aptitudes and interests and of different vocational or professional destinations where they may meet and discuss the problems of citizenship. The social core should provide an opportunity for boys engaged in industrial training to associate their labor with its large industrial and social significance. The sons of capitalists and of laborers working together on the same task should gather some sane ideas on the history and the present meaning of trade unions and the organization of capital. The desire for a career is fundamental in the life of every boy. This career and the life surrounding it should be idealized before they are actualized. Such is the twofold purpose of democracy's high school.